

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CN2006/000678

## A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B23B51+, B23B31+, B23Q3+, B23B3+

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI, PAJ, CNPAT: DRILL, LOCK, RATCHET, DETENT, ELASTIC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN1562541A (YOU, Youmin) 12.JAN. 2005 (12.01.2005) 全文	1-9
A	CN2582790Y (WEIDA MACHINE CO LTD SHANDON) 29.OCT. 2003 (29.10.2003) see the whole document	1-9
A	CN2723084Y (WEIDA MACHINE CO LTD SHANDON) 07.SEP. 2005 (07.09.2005) see the whole document	1-9
A	US6848691B2 (Yang et al) 01.FEB. 2005 (01.02.2005) see the whole document	1-9
A	EP1314499A1 (METABOWERKE GMBH & CO) 28.MAY. 2003 (28.05.2003) see the whole document	1-9

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

“A” document defining the general state of the art which is not considered to be of particular relevance

“E” earlier application or patent but published on or after the international filing date

“L” document which may throw doubts on priority claim (S) or which is cited to establish the publication date of another citation or other special reason (as specified)

“O” document referring to an oral disclosure, use, exhibition or other means

“P” document published prior to the international filing date but later than the priority date claimed

“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

“&” document member of the same patent family

Date of the actual completion of the international search  
12.January 2007 (12.01.2007)

Date of mailing of the international search report

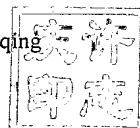
01.FEB.2007 (01.02.2007)

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# INTERNATIONAL SEARCH REPORT

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B23B31/12 (2006.01) i

B23Q3/12 (2006.01) i

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
PCT/CN2006/000678

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN1562541A	12.01.2005	None	
CN2582790Y	29.10.2003	US2005258605A1	24.11.2005
CN2723084Y	07.09.2005	None	
US6848691B2	01.02.2005	WO02100583A1	19.12.2002
		CN1390669A	15.01.2003
		US2003107190A1	12.06.2003
		EP1423223A1	02.06.2004
		AU2002315623A1	23.12.2002
		US2005161890A1	28.07.2005
		CN1217762C	07.09.2005
EP1314499A1	28.05.2003	DE10157055A1	12.06.2003

# 国际检索报告

国际申请号  
PCT/CN2006/000678

## A. 主题的分类

参见附加页

按照国际专利分类表(IPC)或者同时按照国家分类和 IPC 两种分类

## B. 检索领域

检索的最低限度文献(标明分类系统和分类号)

B23B51+, B23B31+, B23Q3+, B23B3+

包含在检索领域中的除最低限度文献以外的检索文献

在国际检索时查阅的电子数据库(数据库的名称, 和使用的检索词(如使用))

EPODOC, WPI, PAJ, CNPAT: DRILL, LOCK, RATCHET, DETENT, ELASTIC 钻, 棘, 齿, 自锁, 锁紧, 防松, 螺, 丝母, 弹

## C. 相关文件

类 型*	引用文件, 必要时, 指明相关段落	相关的权利要求
A	CN1562541A (游友民) 12.1 月 2005 (12.01.2005) 全文	1-9
A	CN2582790Y (山东威达机械股份有限公司) 29.10 月 2003 (29.10.2003) 全文	1-9
A	CN2723084Y (山东威达机械股份有限公司) 07.9 月 2005 (07.09.2005) 全文	1-9
A	US6848691B2 (Yang 等) 01.2 月 2005 (01.02.2005) 全文	1-9
A	EP1314499A1 (METABOWERKE GMBH & CO) 28.5 月 2003 (28.05.2003) 全文	1-9

☐ 其余文件在 C 栏的续页中列出。

☒ 见同族专利附件。

\* 引用文件的具体类型:

“A” 认为不特别相关的表示了现有技术一般状态的文件

“E” 在国际申请日的当天或之后公布的在先申请或专利

“L” 可能对优先权要求构成怀疑的文件, 或为确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件

“O” 涉及口头公开、使用、展览或其他方式公开的文件

“P” 公布日先于国际申请日但迟于所要求的优先权日的文件

“T” 在申请日或优先权日之后公布, 与申请不相抵触, 但为了理解发明之理论或原理的在后文件

“X” 特别相关的文件, 单独考虑该文件, 认定要求保护的发明不是新颖的或不具有创造性

“Y” 特别相关的文件, 当该文件与另一篇或者多篇该类文件结合并且这种结合对于本领域技术人员为显而易见时, 要求保护的发明不具有创造性

“&” 同族专利的文件

国际检索实际完成的日期

12.1 月 2007 (12.01.2007)

国际检索报告邮寄日期

01.2月 2007 (01.02.2007)

中华人民共和国国家知识产权局(ISA/CN)

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电话号码: (86-10) 62085454



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B23Q3/12 (2006.01) i

国际检索报告  
关于同族专利的信息

国际申请号  
PCT/CN2006/000678

检索报告中引用的 专利文件	公布日期	同族专利	公布日期
CN1562541A	12.01.2005	无	
CN2582790Y	29.10.2003	US2005258605A1	24.11.2005
CN2723084Y	07.09.2005	无	
US6848691B2	01.02.2005	WO02100583A1	19.12.2002
		CN1390669A	15.01.2003
		US2003107190A1	12.06.2003
		EP1423223A1	02.06.2004
		AU2002315623A1	23.12.2002
		US2005161890A1	28.07.2005
		CN1217762C	07.09.2005
EP1314499A1	28.05.2003	DE10157055A1	12.06.2003